

CLIPPEDIMAGE= JP408178830A  
PAT-NO: JP408178830A  
DOCUMENT-IDENTIFIER: JP 08178830 A  
TITLE: DETECTOR

PUBN-DATE: July 12, 1996

INVENTOR-INFORMATION:

NAME

SAKATA, MASAKAZU

FUJITA, MASAYUKI

NISHIO, YOSHITAKA

SHIBATA, KENICHI

ASSIGNEE-INFORMATION:

NAME

SANYO ELECTRIC CO LTD

COUNTRY

N/A

APPL-NO: JP06323047

APPL-DATE: December 26, 1994

INT-CL\_(IPC): G01N015/14

ABSTRACT:

PURPOSE: To determine the size of a particle using a simple optical detection means by determining the ratio of intensity of light scattering in a plurality of different directions.

CONSTITUTION: A semiconductor laser (light source) 2 emits laser light (irradiation light) for irradiating a solution or a gas. A first photodetector element 3 comprises photodiodes, or the like, arranged on a line connecting the emitting part of the laser 2 and a quartz container 1. A second photodetector element 4 comprises photodiodes, or the like, receiving the light backscattering at an angle  $\theta$ . arranged at the angle  $\theta$  with respect to the central optical axis of laser light emitted from the laser 2 on the same side as the laser 2 with respect to the container 1. An arithmetic unit calculates the ratio of intensity of signals outputted from the elements 3, 4 and determines the particle size based on the ratio of

DERWENT-ACC-NO: 1996-374863  
DERWENT-WEEK: 199638  
COPYRIGHT 1999 DERWENT INFORMATION LTD

TITLE: Optical particle detector for measuring particle size distribution -  
has several optical sensors which detects size of irradiated material from  
intensity ratio of scattered light in several direction

PATENT-ASSIGNEE: SANYO ELECTRIC CO LTD[SAOL]

PRIORITY-DATA: 1994JP-0323047 (December 26, 1994)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	
PAGES	MAIN-IPC		
JP 08178830 A	July 12, 1996	N/A	005
G01N 015/14			

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO
APPL-DATE		
JP08178830A	N/A	1994JP-0323047
December 26, 1994		

INT-CL\_(IPC): G01N015/14

ABSTRACTED-PUB-NO: JP08178830A

BASIC-ABSTRACT: The detector includes a semiconductor laser (2) which irradiates a light to an irradiated material (1). The irradiated material scatters the irradiated light and produces an incidence angle in several directions.

The produced incidence angle which differs mutually is detected by several optical sensors (3,4). The size of the irradiated material is detected by the optical sensors from the intensity ratio of the scattered light in several directions.

ADVANTAGE - Reduces optical particle detector cost due to eliminated complex optical sensor. Accurately detects size of irradiated material

from intensity  
ratio of scattering light accurately. Ensures irradiated  
material with  
improved size detection sensitivity. Prevents direct projection  
of irradiated  
light in optical detector.

CHOSEN-DRAWING: Dwg.1/2

TITLE-TERMS:

OPTICAL PARTICLE DETECT MEASURE PARTICLE SIZE DISTRIBUTE OPTICAL  
SENSE DETECT  
SIZE IRRADIATE MATERIAL INTENSITY RATIO SCATTERING LIGHT  
DIRECTION

DERWENT-CLASS: S03

EPI-CODES: S03-E04C; S03-F05C; S03-F06C;

SECONDARY-ACC-NO:

Non-CPI Secondary Accession Numbers: N1996-315484